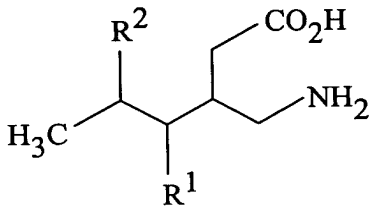
CLAIMS

1. A method for treating restless leg syndrome comprising administering a therapeutically effective amount of a compound according to formula I :



I

or a pharmaceutically acceptable salt thereof to a mammal in need of said treatment wherein:

R^1 is hydrogen, straight or branched alkyl of from 1 to 6 carbon atoms or phenyl;

R^2 is straight or branched alkyl of from 4 to 8 carbon atoms,
straight or branched alkenyl of from 2 to 8 carbon atoms,
cycloalkyl of from 3 to 7 carbon atoms,
alkoxy of from 1 to 6 carbon atoms,
- alkylcycloalkyl,
- alkylalkoxy,
- alkyl OH,
- alkylphenyl,
- alkylphenoxy, and
- substituted phenyl.

2. The method according to Claim 1 wherein R^1 is hydrogen and R^2 is straight or branched alkyl of from 4 to 8 carbon atoms.

3. The method according to Claim 1 wherein R^2 is substituted phenyl, or alkylphenyl.

4. The method according to Claim 1 wherein R^2 is alkylphenoxy.

5. The method according to Claim 1 wherein R^2 is cycloalkyl or alkylcycloalkyl.

6. The method according to Claim 1 wherein R^2 is alkylhydroxy.

7. The method according to Claim 1 wherein said compound is selected from:

3-Aminomethyl-5-methyl-nonanoic acid;
3-Aminomethyl-5-methyl-decanoic acid;
3-Aminomethyl-5-methyl-undecanoic acid;
3-Aminomethyl-5-methyl-dodecanoic acid;
3-Aminomethyl-5-methyl-tridecanoic acid;
3-Aminomethyl-5-cyclopropyl-hexanoic acid;
3-Aminomethyl-5-cyclobutyl-hexanoic acid;
3-Aminomethyl-5-trifluoromethyl-hexanoic acid;
3-Aminomethyl-5-(2-chlorophenyl)-hexanoic acid;
3-Aminomethyl-5-(3-chlorophenyl)-hexanoic acid;
3-Aminomethyl-5-(4-chlorophenyl)-hexanoic acid;
3-Aminomethyl-5-(2-methoxyphenyl)-hexanoic acid;
3-Aminomethyl-5-(3-methoxyphenyl)-hexanoic acid;
3-Aminomethyl-5-(4-methoxyphenyl)-hexanoic acid; and
3-Aminomethyl-5-(phenylmethyl)-hexanoic acid.

8. A method for treating restless leg syndrome comprising administering a therapeutically effective amount of a compound or a pharmaceutically acceptable salt thereof to a mammal in need of said treatment wherein said compound is

(3S,5R)-3-Aminomethyl-5-methyl-heptanoic acid.

9. A method for treating restless leg syndrome comprising administering a therapeutically effective amount of a compound or a pharmaceutically

acceptable salt thereof to a mammal in need of said treatment wherein said compound is

(3S,5R)-3-Aminomethyl-5-methyl-octanoic acid.

10. The method according to Claim 1 wherein said compound is

(3S,5R)-3-Aminomethyl-5-methyl-nonanoic acid.

11. The method according to Claim 1 wherein said compound is

(3S,5R)-3-Aminomethyl-5-methyl-decanoic acid.

12. The method according to Claim 1 wherein said compound is

(3S,5R)-3-Aminomethyl-5-methyl-undecanoic acid.

13. The method according to Claim 1 wherein said compound is

(3S,5R)-3-Aminomethyl-5-methyl-dodecanoic acid.

14. The method according to Claim 1 wherein said compound is selected from:

(3S,5R)-3-Aminomethyl-5,9-dimethyl-decanoic acid;
(3S,5R)-3-Aminomethyl-5-methyl-heptanoic acid;
(3S,5R)-3-Aminomethyl-5,7-dimethyl-octanoic acid;
(3S,5R)-3-Aminomethyl-5,10-dimethyl-undecanoic acid;
(3S,5R)-3-Aminomethyl-6-cyclopropyl-5-methyl-hexanoic acid;
(3S,5R)-3-Aminomethyl-6-cyclobutyl-5-methyl-hexanoic acid;
(3S,5R)-3-Aminomethyl-6-cyclopentyl-5-methyl-hexanoic acid;
(3S,5R)-3-Aminomethyl-6-cyclohexyl-5-methyl-hexanoic acid;
(3S,5R)-3-Aminomethyl-7-cyclopropyl-5-methyl-heptanoic acid;
(3S,5R)-3-Aminomethyl-7-cyclobutyl-5-methyl-heptanoic acid;
(3S,5R)-3-Aminomethyl-7-cyclopentyl-5-methyl-heptanoic acid;
(3S,5R)-3-Aminomethyl-7-cyclohexyl-5-methyl-heptanoic acid;
(3S,5R)-3-Aminomethyl-8-cyclopropyl-5-methyl-octanoic acid;
(3S,5R)-3-Aminomethyl-8-cyclobutyl-5-methyl-octanoic acid;
(3S,5R)-3-Aminomethyl-8-cyclopentyl-5-methyl-octanoic acid;

(3S,5R)-3-Aminomethyl-8-cyclohexyl-5-methyl-octanoic acid;
(3S,5R)-3-Aminomethyl-8-fluoro-5-methyl-octanoic acid; and
(3S,5R)-3-Aminomethyl-9-fluoro-5-methyl-nonanoic acid.

15. The method according to Claim 1 wherein said compound is selected from:

(3S,5S)-3-Aminomethyl-5-methoxy-hexanoic acid;
(3S,5S)-3-Aminomethyl-5-ethoxy-hexanoic acid;
(3S,5S)-3-Aminomethyl-5-propoxy-hexanoic acid;
(3S,5S)-3-Aminomethyl-5-isopropoxy-hexanoic acid;
(3S,5S)-3-Aminomethyl-5-*tert*-butoxy-hexanoic acid;
(3S,5S)-3-Aminomethyl-5-fluoromethoxy-hexanoic acid;
(3S,5S)-3-Aminomethyl-5-(2-fluoro-ethoxy)-hexanoic acid;
(3S,5S)-3-Aminomethyl-5-(3,3,3-trifluoro-propoxy)-hexanoic acid;
(3S,5S)-3-Aminomethyl-5-phenoxy-hexanoic acid;
(3S,5S)-3-Aminomethyl-5-(4-chloro-phenoxy)-hexanoic acid;
(3S,5S)-3-Aminomethyl-5-(3-chloro-phenoxy)-hexanoic acid;
(3S,5S)-3-Aminomethyl-5-(2-chloro-phenoxy)-hexanoic acid;
(3S,5S)-3-Aminomethyl-5-(4-fluoro-phenoxy)-hexanoic acid;
(3S,5S)-3-Aminomethyl-5-(3-fluoro-phenoxy)-hexanoic acid;
(3S,5S)-3-Aminomethyl-5-(2-fluoro-phenoxy)-hexanoic acid;
(3S,5S)-3-Aminomethyl-5-(4-methoxy-phenoxy)-hexanoic acid;
(3S,5S)-3-Aminomethyl-5-(3-methoxy-phenoxy)-hexanoic acid;
(3S,5S)-3-Aminomethyl-5-(2-methoxy-phenoxy)-hexanoic acid;
(3S,5S)-3-Aminomethyl-5-(4-nitro-phenoxy)-hexanoic acid;
(3S,5S)-3-Aminomethyl-5-(3-nitro-phenoxy)-hexanoic acid;
(3S,5S)-3-Aminomethyl-5-(2-nitro-phenoxy)-hexanoic acid;
(3S,5S)-3-Aminomethyl-5-methyl-6-propoxy-hexanoic acid;
(3S,5S)-3-Aminomethyl-6-isopropoxy-5-methyl-hexanoic acid;
(3S,5S)-3-Aminomethyl-6-*tert*-butoxy-5-methyl-hexanoic acid;
(3S,5S)-3-Aminomethyl-6-fluoromethoxy-5-methyl-hexanoic acid;
(3S,5S)-3-Aminomethyl-6-(2-fluoro-ethoxy)-5-methyl-hexanoic acid;

(3S,5S)-3-Aminomethyl-5-methyl-6-(3,3,3-trifluoro-propoxy)-hexanoic acid;

(3S,5S)-3-Aminomethyl-5-methyl-6-phenoxy-hexanoic acid;

(3S,5S)-3-Aminomethyl-6-(4-chloro-phenoxy)-5-methyl-hexanoic acid;

(3S,5S)-3-Aminomethyl-6-(3-chloro-phenoxy)-5-methyl-hexanoic acid;

(3S,5S)-3-Aminomethyl-6-(2-chloro-phenoxy)-5-methyl-hexanoic acid;

(3S,5S)-3-Aminomethyl-6-(4-fluoro-phenoxy)-5-methyl-hexanoic acid;

(3S,5S)-3-Aminomethyl-6-(3-fluoro-phenoxy)-5-methyl-hexanoic acid;

(3S,5S)-3-Aminomethyl-6-(2-fluoro-phenoxy)-5-methyl-hexanoic acid;

(3S,5S)-3-Aminomethyl-6-(4-methoxy-phenoxy)-5-methyl-hexanoic acid;

(3S,5S)-3-Aminomethyl-6-(3-methoxy-phenoxy)-5-methyl-hexanoic acid;

(3S,5S)-3-Aminomethyl-6-(2-methoxy-phenoxy)-5-methyl-hexanoic acid;

(3S,5S)-3-Aminomethyl-5-methyl 6-(4-trifluoromethyl-phenoxy)-hexanoic acid;

(3S,5S)-3-Aminomethyl-5-methyl 6-(3-trifluoromethyl-phenoxy)-hexanoic acid;

(3S,5S)-3-Aminomethyl-5-methyl 6-(2-trifluoromethyl-phenoxy)-hexanoic acid;

(3S,5S)-3-Aminomethyl-5-methyl 6-(4-nitro-phenoxy)-hexanoic acid;

(3S,5S)-3-Aminomethyl-5-methyl 6-(3-nitro-phenoxy)-hexanoic acid;

(3S,5S)-3-Aminomethyl-5-methyl 6-(2-nitro-phenoxy)-hexanoic acid;

(3S,5S)-3-Aminomethyl-6-benzyloxy-5-methyl-hexanoic acid;

(3S,5S)-3-Aminomethyl-7-hydroxy-5-methyl-heptanoic acid;

(3S,5S)-3-Aminomethyl-7-methoxy-5-methyl-heptanoic acid;

(3S,5S)-3-Aminomethyl-5-methyl-7-propoxy-heptanoic acid;

(3S,5S)-3-Aminomethyl-7-isopropoxy-5-methyl-heptanoic acid;

(3S,5S)-3-Aminomethyl-7-*tert*-butoxy-5-methyl-heptanoic acid;

(3S,5S)-3-Aminomethyl-7-fluoromethoxy-5-methyl-heptanoic acid;

(3S,5S)-3-Aminomethyl-7-(2-fluoro-ethoxy)-5-methyl-heptanoic acid;

(3S,5S)-3-Aminomethyl-5-methyl-7-(3,3,3-trifluoro-propoxy)-heptanoic acid;

(3S,5S)-3-Aminomethyl-7-benzyloxy-5-methyl-heptanoic acid;

(3S,5S)-3-Aminomethyl-5-methyl-7-phenoxy-heptanoic acid;

(3S,5S)-3-Aminomethyl-7-(4-chloro-phenoxy)-5-methyl-heptanoic acid;

(3S,5S)-3-Aminomethyl-7-(3-chloro-phenoxy)-5-methyl-heptanoic acid;

(3S,5S)-3-Aminomethyl-7-(2-chloro-phenoxy)-5-methyl-heptanoic acid;

(3S,5S)-3-Aminomethyl-7-(4-fluoro-phenoxy)-5-methyl-heptanoic acid;

(3S,5S)-3-Aminomethyl-7-(3-fluoro-phenoxy)-5-methyl-heptanoic acid;

(3S,5S)-3-Aminomethyl-7-(2-fluoro-phenoxy)-5-methyl-heptanoic acid;

(3S,5S)-3-Aminomethyl-7-(4-methoxy-phenoxy)-5-methyl-heptanoic acid;

(3S,5S)-3-Aminomethyl-7-(3- methoxy-phenoxy)-5-methyl-heptanoic acid;

(3S,5S)-3-Aminomethyl-7-(2- methoxy-phenoxy)-5-methyl-heptanoic acid;

(3S,5S)-3-Aminomethyl-5-methyl-7-(4-trifluoromethyl-phenoxy)-heptanoic acid;

(3S,5S)-3-Aminomethyl-5-methyl-7-(3-trifluoromethyl-phenoxy)-heptanoic acid;

(3S,5S)-3-Aminomethyl-5-methyl-7-(2-trifluoromethyl-phenoxy)-heptanoic acid;

(3S,5S)-3-Aminomethyl-5-methyl-7-(4-nitro-phenoxy)-heptanoic acid;

(3S,5S)-3-Aminomethyl-5-methyl-7-(3-nitro-phenoxy)-heptanoic acid;

(3S,5S)-3-Aminomethyl-5-methyl-7-(2-nitro-phenoxy)-heptanoic acid;

(3S,5S)-3-Aminomethyl-5-methyl-6-phenyl-hexanoic acid;

(3S,5S)-3-Aminomethyl-6-(4-chloro-phenyl)-5-methyl-hexanoic acid;

(3S,5S)-3-Aminomethyl-6-(3-chloro-phenyl)-5-methyl-hexanoic acid;

(3S,5S)-3-Aminomethyl-6-(2-chloro-phenyl)-5-methyl-hexanoic acid;

(3S,5S)-3-Aminomethyl-6-(4-methoxy-phenyl)-5-methyl-hexanoic acid;

(3S,5S)-3-Aminomethyl-6-(3-methoxy-phenyl)-5-methyl-hexanoic acid;

(3S,5S)-3-Aminomethyl-6-(2-methoxy-phenyl)-5-methyl-hexanoic acid;

(3S,5S)-3-Aminomethyl-6-(3-fluoro-phenyl)-5-methyl-hexanoic acid;

(3S,5S)-3-Aminomethyl-6-(2-fluoro-phenyl)-5-methyl-hexanoic acid;

(3S,5R)-3-Aminomethyl-5-methyl-7-phenyl-heptanoic acid;

(3S,5R)-3-Aminomethyl-7-(4-chloro-phenyl)-5-methyl-heptanoic acid;

(3S,5R)-3-Aminomethyl-7-(3-chloro-phenyl)-5-methyl-heptanoic acid;

(3S,5R)-3-Aminomethyl-7-(2-chloro-phenyl)-5-methyl-heptanoic acid;

(3S,5R)-3-Aminomethyl-7-(4-methoxy-phenyl)-5-methyl-heptanoic acid;

(3S,5R)-3-Aminomethyl-7-(3-methoxy-phenyl)-5-methyl-heptanoic acid;

(3S,5R)-3-Aminomethyl-7-(2-methoxy-phenyl)-5-methyl-heptanoic acid;

(3S,5R)-3-Aminomethyl-7-(4-fluoro-phenyl)-5-methyl-heptanoic acid;

(3S,5R)-3-Aminomethyl-7-(3-fluoro-phenyl)-5-methyl-heptanoic acid;

(3S,5R)-3-Aminomethyl-7-(2-fluoro-phenyl)-5-methyl-heptanoic acid;

(3S,5S)-3-Aminomethyl-5-methyl-hept-6-enoic acid;

(3S,5R)-3-Aminomethyl-5-methyl-oct-7-enoic acid;

(3S,5R)-3-Aminomethyl-5-methyl-non-8-enoic acid;

(E)-(3S,5S)-3-Aminomethyl-5-methyl-oct-6-enoic acid;

(Z)-(3S,5S)-3-Aminomethyl-5-methyl-oct-6-enoic acid;

(Z)-(3S,5S)-3-Aminomethyl-5-methyl-non-6-enoic acid;

(E)-(3S,5S)-3-Aminomethyl-5-methyl-non-6-enoic acid;

(E)-(3S,5R)-3-Aminomethyl-5-methyl-non-7-enoic acid;

(Z)-(3S,5R)-3-Aminomethyl-5-methyl-non-7-enoic acid;

(Z)-(3S,5R)-3-Aminomethyl-5-methyl-dec-7-enoic acid;

(E)-(3S,5R)-3-Aminomethyl-5-methyl-undec-7-enoic acid;

(3S,5S)-3-Aminomethyl-5,6, 6-trimethyl-heptanoic acid;

(3S,5S)-3-Aminomethyl-5-cyclopropyl-hexanoic acid;

(3S,5S)-3-Aminomethyl-5-cyclobutyl-hexanoic acid;

(3S,5R)-3-Aminomethyl-5-methyl-8-phenyl-octanoic acid;

(3S,5S)-3-Aminomethyl-5-methyl-6-phenyl-hexanoic acid; and

(3S,5R)-3-Aminomethyl-5-methyl-7-phenyl-heptanoic acid.

16. A method for treating restless leg syndrome comprising administering a therapeutically effective amount of a compound or a pharmaceutically acceptable salt thereof to a mammal in need of said treatment wherein said compound is selected from:

3-Aminomethyl-5-methylheptanoic acid;
3-Aminomethyl-5-methyl-octanoic acid;
3-Aminomethyl-4,5-dimethyl-hexanoic acid;
(3S,4S)3-Aminomethyl-4,5-dimethyl-hexanoic acid;
(3R,4R)3-Aminomethyl-4,5-dimethyl-hexanoic acid MP;
3-Aminomethyl-4-isopropyl-hexanoic acid;
3-Aminomethyl-4-isopropyl-heptanoic acid;
(3S,5S)-3-Aminomethyl-6-fluoro-5-methyl-hexanoic acid;
(3S,5S)-3-Aminomethyl-7-fluoro-5-methyl-heptanoic acid;
(3S,5S)-3-Aminomethyl-7,7,7-trifluoro-5-methyl-heptanoic acid;
(3S,5R)-3-Aminomethyl-8,8,8-trifluoro-5-methyl-octanoic acid;
(3S,5S)-3-Aminomethyl-5,6-dimethyl-heptanoic acid;
(3R,4R,5R)-3-Aminomethyl-4,5-dimethyl-heptanoic acid; and
(3R,4R,5R)-3-Aminomethyl-4,5-dimethyl-octanoic acid.